Sub A1 What is claimed is:

1. An electrochemical gas sensor for determining the concentration of oxidizable gas components in gas mixtures, which has an electrochemical measuring cell (13) having a measuring electrode (18) and a reference electrode (19), the measuring electrode (18) being made of a material that is not able, or is not able to completely catalyze the establishment of gas equilibrium, wherein, additionally, at least one electrochemical pumping cell (12), having at least one inner pumping electrode (17), is provided, which, together with the measuring electrode (18), is positioned in a measuring gas compartment (22), the pumping cell (12) pumping oxygen into or out of the measuring gas compartment (22).

2. The gas sensor as recited in Claim 1, wherein an at least approximately constant partial pressure of oxygen can be set in the measuring gas compartment using the pumping cell (12).

3. The gas sensor as recited in Claim 1 or 2, wherein the partial pressure of oxygen which can be set in the measuring gas compartment (22) using the pumping cell (12) corresponds to a lambda value of ≥ 1.3.

4. The gas sensor as recited in Claim 1, wherein the measuring electrode (18) and the inner pumping electrode (17) are positioned opposite each other in the measuring gas compartment (22).

5. The gas sensor as recited in Claim 1 or 4, wherein the measuring electrode (18) contains gold or a platinum-gold alloy.

6. The gas sensor as recited in Claim 5, wherein the gold proportion in the platinum-gold alloy of

the measuring electrode (18) is 0.5 to 20 weight-%, preferably 10 weight-%.

7. The gas sensor as recited in Claim 1 or 4, wherein, in addition to the measuring electrode (18), the inner pumping electrode (17) is made of a material which is not able, or not completely able to catalyze the establishment of gas equilibrium.

8. The gas sensor as recited in Claim 7, wherein the inner pumping electrode (17) contains a platinum-gold alloy having a gold proportion of 0.1 to 3 weight-%, preferably 0.3 to 0.8 weight-%.

9. The gas sensor as recited in Claim 1, wherein the reference electrode (19) is made of a material which is able to catalyze the establishment of gas equilibrium.

10. The gas sensor as recited in Claim 9, wherein the catalytically active material is platinum.

11. The gas sensor as recited in Claim 1, wherein the measuring gas compartment (22) is positioned in one layer plane, and a gas access hole (23) leads to the measuring gas compartment (22).

add A27